Claims

[c1] 1. An arrangement for detecting X-ray radiations comprising:
a carrying member, arranged on at least one side with one or more detectors comprising a plurality of sensors provided on a substrate, wherein said detectors are arranged substantially edge to edge and side by side at least in one row on at least said one side of said carrying member, and said detector further comprising a sensor plane, said sensor plane arranged in an angle incident to X-ray beams.

[c2] 2. The arrangement according to claim 1 wherein at least two detectors are arranged in at least two levels and displaced relative each other such that an inactive section on one detector is overlapped with an active area of the other electrode.

[c3] 3. The arrangement according to claim 1 wherein said sensor plane is arranged in parallel to incident X-ray beams.

[c4] 4. The arrangement according to claim 1 wherein said carrying member is tilted to arrange said sensor plane in said angle.

[c5] 5. The arrangement according to claim 1 wherein said detector is arranged on a supporting member.

[c6] 6. The arrangement according to claim 1 wherein the detectors are further comprised of a scintillator optically connected to a CCD, silicon diodes, a gaseous detector, a parallel plate chamber where the gas volume is oriented edge-on to the incident X-ray's.

[c7] 7. An X-ray apparatus comprising:
an essentially planar member of a material non-transparent to X-rays, having an elongated slot formed therein,

an array of detectors provided in communication with said slots and arranged to detect - rays and for providing a signal representing the intensity of said X-rays imaging thereon,

means for moving a beam directing member and an object to be examined relative each other,

wherein said array of detectors comprises substantially in parallel arranged detector arrangements consisting of one or several carrying members, each arranged on at least one face with detectors comprising a plurality of sensors provided on a substrate, and wherein said detectors are arranged substantially edge to edge and side by side at least least one side of said carrying member.

[c8] 8. The apparatus according to claim 7 wherein at least two detectors are arranged in at least two levels and displaced relative each other such that an inactive section on one detector is overlapped with an active area of the other electrode.

[c9] 9. The apparatus according to claim 7 wherein it further includes means to acquire data from said detector arrays at intervals corresponding to a fraction of the width of said sensor arrays.

[c10] 10. The apparatus according to claim 9 wherein the sensors on said detector arrays are made of silicon waters oriented substantially edge-on to the incident X-ray's.

[c11] 11. The apparatus according to claim 7 wherein said detector has a sensor plane, and that sensor plane is arranged in an angle to incident x-ray beams.

[c12] 12. The apparatus according to claim 7 wherein said detector has a sensor plane, and that sensor plane is arranged in parallel to incident x-ray beams.

[c13] 13. The apparatus according to claim 7 wherein said beam directing member is arranged with slots in at least two rows, and slots in each row displaced relative each other.

[c14] 14. The apparatus according to claim 7 wherein said beam directing member is refracting or focusing member.

[c15] 15. A method for scanning in an apparatus according to claim 7, comprising the steps of:
arranging a first part of collimators before start of the scanning in a field of view while the second part of the collimators are outside the field of view,

starting the scan from a first position and said collimators and detectors having a first speed,
bringing the said collimators and detectors to a maximum, substantially constant speed when all collimators and detectors are in the field of view, and when the first collimator is outside the field of view, bringing the said collimators and detectors to a third speed.

[c16] 16. The method according to claim 15 wherein the further step of stopping the scan when said second part of the collimators are outside the field of view.

[c17] 17. The method according to claim 15 wherein an acceleration time before the scan reaches a maximum speed and a deceleration time before it stops is determined in such a way that the 10 parts of an image where the acceleration and retardation takes place obtains substantially a same photon statistics as the rest of the image.

[c18] 18. A method for scanning in an apparatus according to claim 7, comprising the steps of:
starting a scan,
when the scan starts, providing said slots and corresponding detectors substantially outside a field of view;
passing substantially all slots and corresponding detectors the object and thus the said field of view
measuring scan X-ray fluxes together with position coordinates for all detectors;
terminating the scan only after all slots and corresponding detectors are substantially outside the field of view.

[c19] 19. The method according to claim 18, further comprising the step of incrementing the scanning at least a distance corresponding to a fraction of a distance of the detectors arrangements.

[c20] 20. The method according to claim 19 wherein the scan is continuous and that readout of data is performed at intervals corresponding to a fraction of a distance between the detector arrangements.

[c21] 21. The method as claimed in claim 19 wherein readout data for each increment and for each sensor array is stored as data arrays, and wherein said stored data for each sensor array are separately combined to form an image, and wherein images obtained by each sensor array are superposed to form a final image.